

### REMARKS

With entry of this amendment, claims 1-6, 10-11, 24-30, 33-40, 44-49, 57, 61, and 75-76 are pending. Claims in nonelected groups II-V and XII-XIII have been cancelled. Claims in groups VI-XI, drawn to methods, have been amended to be limited to using the nucleic acid recited in claim 5 or claim 6. Claim 5 has been amended to include the limitations of the base claim and the intervening claims, with the recitation of "homologue" omitted. Claim 6 has been amended to independent form. Claim 57 has been amended to include the limitations of claims 58-60. Support for the amendments can be found in the originally filed claims, and throughout the specification. No new matter has been added. Reconsideration is requested.

Claims 1-4, 10-11 and 57-59 were rejected under 35 USC § 112, first paragraph, because the specification, while being considered by the Examiner to be enabling for an isolated human alpha-synuclein mutated to adenine at position 209, does not reasonably provide enablement for any mutated human alpha-synuclein or homolog thereof or any other mutation at position 209. Claim 5 is newly rejected because the Examiner believes that the specification does not reasonably provide enablement for any mutated human alpha-synuclein or homolog thereof or any other mutation at position 209.

Although Applicants strongly disagree with the Examiner's position for reasons of record, in order to expedite prosecution, Claims 5 and 57 have been amended to be limited to the scope which the Examiner indicated was enabled. Claims 10-11 have been amended to depend from claim 5, and are accordingly also believed to be free of the rejection. Claims 58 and 59 have been cancelled.

The rejection of claims 1-4 is traversed for the following reasons.

First, it is respectfully submitted that there are only a limited number of possible mutations at position 209, and thus a limited number of mutations to be made and used. This is easily within the skill of an ordinary artisan, and would not require undue experimentation. Accordingly, it is submitted that claim 4 is clearly enabled. Reconsideration and withdrawal of the rejection with respect to claims 4 is accordingly requested.

Second, it is respectfully submitted that persons of skill in the art will be able, using the methods described in the specification and the general knowledge of the art, to make and use the nucleic acids of claims 1-3, without undue experimentation.

Two articles subsequent to the present disclosure demonstrate that OTHER missense mutations in the alpha-synuclein gene can cause Parkinson's disease were submitted with the response dated March 12, 2004.

They are:

Kruger et al. Ala30Pro mutation in the gene encoding alpha-synuclein in Parkinson's disease. *Nature Genetics*, 18:106-108, 1998.

Zarranz et al. The New Mutation, E36K, of alpha-synuclein causes Parkinson and Lewy Body Dementia. *Ann Neurol* 55:164-173, 2004.

It is respectfully submitted that these references present convincing evidence that other such mutations can be made and used without undue experimentation. Reconsideration and withdrawal of the rejection of claims 1-4 are respectfully requested.

Claims 1-4, 10-11 and 57-59 were rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. Claim 5 is newly rejected.

Claims 5 and 57 have been amended to be limited to the scope which the Examiner indicated met the written description requirement. Claims 10-11 have been amended to depend from claim 5, and are accordingly also believed to be free of the rejection. Claims 58 and 59 have been cancelled. Accordingly, it is believed that claims 5, 10-11 and 57 are free of the rejection.

The rejection of claims 1-4 is traversed for the following reasons.

It is the Examiner's position that the genus disclosed by applicants encompasses nucleotide sequences that are at least 25% homologous to SEQ ID NO:1 and alpha synuclein sequences wherein the mutation is a substitution deletion, transversion or transition, and that the description at pages 26 and 30 of the specification is insufficient to provide support for the scope of the claimed subject matter.

First, with respect to claim 4, it is respectfully submitted that the description provided in the specification is clearly adequate to cover the limited number of variants containing a mutation at position 209. Such variants can be easily made and tested given the level of knowledge in the art and the teachings of the present specification.

Accordingly, reconsideration and withdrawal of the rejection of claim 4 are respectfully requested.

Furthermore, as noted above, two articles subsequent to the present disclosure demonstrate that OTHER missense mutations in the alpha-synuclein gene can cause Parkinson's disease. It is respectfully submitted that this provides ample evidence that persons of skill in the art would be able to practice the invention as claimed in claims 1-3.

Accordingly, it is respectfully submitted that the presently claimed invention meets both the written description and the enablement requirements for patentability. Reconsideration and withdrawal of the rejections are respectfully requested.

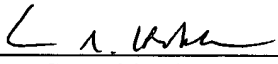
Applicants appreciate the Examiner's indication that claims 5, 6 and 60-61 would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims. Claims 5 and 6 have been so amended. Claim 57 has been amended to include the limitations of claims 58-60, and is believed to be free of the rejections. Claim 61 has been amended to depend from claim 57, and is also believed to be free of the rejections.

Method claims 24-30, 33-40 and 44-49, which were withdrawn from consideration as being in a nonelected group, have been rewritten to include the limitations of the product. In addition, new claims 75 and 76 recite parallel methods for using the products of claims 5 and 6 to detect Parkinson's Disease. Accordingly, consideration and allowance of method claims 24-30, 33-40, 44-49, and 75-76 is respectfully requested.

All rejections having been addressed, it is respectfully submitted that the application is in order for allowance, and Notice to that effect is respectfully requested.

Respectfully submitted,

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